THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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MAIZE POISONING.

That maize, under certain conditions, becomes injurious to horses is well-known. In veterinary literature may be found cases of poisoning due to bad oats and bad hay. It would be strange if bad maize had no injurious effects upon the horse.

The peculiar thing about maize poisoning is that it seems to result from the use of grain which shows no evidence of deleterious change to the ordinary observer. The maize is not musty, not discoloured and not necessarily soft. Whatever changes have taken place have left nothing which the ordinary horseman can detect, and we have yet to learn whether even an expert can point to a definite appearance or condition which would enable him to declare a sample of grain dangerous.

We have no practical experience of maize poisoning, and only write this note with the object of eliciting information. Practitioners whose experience and observation we hold in the highest esteem assure us they have traced fatal disease in horses to the maize used for feeding. The maize exhibited nothing in its appearance calculated to excite fear as to its use, and yet some of the horses consuming it were fatally poisoned.

Only a few horses in a stable are affected, and generally the old and weak escape. It is the healthy, free feeding animal that falls the first victim. There are no premonitory symptoms. Purging commences suddenly, continues violently, and the horse dies in a few hours without any signs of abdominal pain and with very little conspicuous disturbance.

Post-mortem lesions are indefinite, stomach probably not abnormal, large intestines full of very liquid fœces, and the mucous membrane highly injected.

If a horse recover from the attack he resumes work in a few days apparently none the worse for his attack. Two or three cases happen in a stable one day and two or three the next until the food is changed, when the disease disappears.

In some stables maize has been used for years with little or no admixture of other grain and no such cases have been seen. In others, maize is only used mixed with other grain and cases occasionally occur. It seems quite certain that sound maize never leads to this disease, and that the symptoms depend entirely upon some specific change in the maize. Whether this change takes place before the grain is shipped, or as the result of damage done in transit, or to some alteration set up by storage when taken from the ship, we do not know. The question requires elucidation, and is well worth attention now that maize is generally more largely used for working horses than any other grain. We should be glad if any of our readers could give any information on the subject.

We need hardly add that this danger attending the use of *bad* maize can in no way detract from the value of *good* maize as a horse-food. Prejudice and ignorance has opposed maize for many years, but the examples of its failure are always due to want of intelligence in its use. No one acquainted with the art and science of feeding horses uses maize by itself—its chemical constitution and physiological action require an admixture of leguminous seeds to make it a really unobjectionable food, and then the mixture is the most economical on the market as well as the best.

THE COUNCIL MEETING.

The somewhat belated report we publish this week of the last meeting of Council shows the difficulty our representative body had to accept the New Charter. There was a technical error in it, but by the advice of our own Solicitor and of special counsel they agreed to accept the document. We think they acted wisely in not risking any further delay The inimical opposition which had been displayed would probably have been continued had the Council declined to accept the Charter, and although it was mostly contemptible in its origin and methods it might have delayed a settlement of the question. The new educational scheme required that we should know at once our position, so that provision should be made for every detail. With the acceptance of the Charter all cause of disunion ceases, and the profession may again devote its energies to constructive legislation. Those who displayed factious opposition will be remembered, and we shall in future have no doubt as to who are friends and who are enemies Many members opposed the new Charter on sound and honest principles—a small minority opposed it from motives which have always been dubious, and in ways which have always been tortuous. We distinguish the two classes. Messrs. Barford and Wragg it will be noted proposed and seconded the motion to accept the new Charter, so that the present Council may be considered free of opponents to this our latest advance.

CASES AND ARTICLES

THE FUNCTIONS OF THE LATERAL CARTILAGES.

By J. A. Gilruth, M.R.C.V.S.

(Prize Essay of the Veterinary Medical Society of the Royal Veterinary College.)

I have the honour this evening to describe what I consider to be the function of the 'lateral cartilages,' peculiar to the foot of solipeds; along with remarks on so-called 'sidebones' and their pathology.

My conclusions are based chiefly on a study of the anatomy of the parts, and of the experiments made by Lungwitz, of Dresden, on the changes of form undergone by the horse's foot under the action of the body-weight. These experiments were made with Förringer's electric apparatus, and the movements of various parts of the foot were carefully observed, the results being published in *The Journal of Comparative Pathology and Therapeutics* of September last year, of which the following is a short synopsis:—

I. In good feet, shod with plain shoes, the frog being allowed to come to the ground, at the moment the weight of the animal was transmitted to the foot there was found to be a slight contraction at the anterior half of the coronary edge of the wall, but at the posterior half (including the heels) there was an expansion, which was greatest at complete extension of the fetlock joint.

II. In good feet, with the frog kept from the ground by means of calkins or other methods of shoeing, the change of form at the *quarters* was a *contraction*, instead of as in other feet an *expansion*; and with only slight expansion at the heels. But in these same feet, when pressure was transmitted to the frog, either by means of a rubber pad or directly with the ground, the normal condition of *expansion* at the quarters obtained.

The sole in all cases descended slightly under the action of the body-weight.

Lungwitz explains these changes thus:—When the foot comes to the ground, the coronary cushion in front is pressed between the os pedis on the one hand, and the horny wall on the other, causing a flow of blood from before backwards, thus producing the swelling at the posterior portion of the coronary edge and the heels. Now presuming that on transmission of body-weight to the foot a forward movement of the upper edge of the ospedis is produced, this accounts for the contraction in front, and perhaps for the dilatation or expansion behind in a healthy foot, with frog pressure. But it will not account for the contraction behind when no frog pressure is allowed, for *a priori* we should expect the same causes to give the same results.

Before describing what in my opinion is the true cause of these phenomena, allow me to recall to your mind roughly a few points in the anatomy of the horse's foot.

The upper edge of the pedal bone gradually slopes backwards and downwards on each side, terminating almost in a point at the retrossal processes. At the posterior portion of this edge are attached the lateral cartilages, one on each side, more or less filling up the space between that edge and the upper edge of the wall, above which it slightly projects. Posteriorly and internally each cartilage is in contact with the plantar cushion; and externally they are in contact with the sensitive laminæ and the coronary cushion.

The plantar cushion occupies the posterior and central parts of the foot, filling up the irregular space between the lateral cartilage, flexor tendon, and common integument. The apex is attached to the solar surface of the os pedis just in front of the semilunar ridge.

The lateral surfaces become continuous with the inner surface of each lateral cartilage. It also joins the coronary cushion posteriorly, which lying in the cutigeral groove almost completely encircles the upper edge of the foot, being continuous with the plantar cushion behind.

When the normal unshod foot comes to the ground during progression, the weight is received chiefly by the plantar cushion, which being fibro-fatty in nature, submits to a considerable change of form. This change of form because of its shape cannot be forwards, because of the pastern becoming almost horizontal cannot be upwards, and because of the ground cannot be downwards, therefore it must be backwards and outwards, being especially directed outwards because of its shape and the median laminæ in its posterior half. Where the greatest pressure then is transmitted is of necessity just where the flexible cartilages are placed to receive it and respond to it. The coronary cushion being continuous with the plantar cushion, the backward and outward movements of the latter will tend to pull upon and tighten the former, especially in front, and thus perhaps aided by a forward movement of the pedal-bone, account for the contraction Lungwitz noted in the anterior half of the horny edge of the wall.

When the foot is relieved from the body-weight, naturally the cartilages resume their normal position in virtue of their own elasticity and that of the plantar cushion.

In cases where no frog pressure is allowed, there is clearly a great factor awanting in causing the backward and outward movement of the plantar cushion, namely the resistance from below. Hence the movement of the plantar cushion must be downwards and slightly backward. We would expect therefore to find the cartilages drawn inwards instead of pushed outwards, and the experiments of Lungwitz shew this to be the case. The chief function of the plantar cushion therefore is to transmit concussion backwards and outwards to the flexible lateral cartilages instead of upwards in the limb; and the chief function of the cartilages is to receive that concussion and under ordinary circumstances they are not injured by it because of their non-sensitive and non-vascular structure together with their flexibility.

Experiments on the horse's foot, in regard to these movements have only been made up to the

present on animals going at a comparatively slow pace. It will be readily admitted, however, that when the animal's speed is accelerated, or when pulling a heavy load, the amount of concussion received by the foot must be greater. But the greater concussion will be met with a greater movement of the plantar cushion and the lateral cartilages, so that with these structures in a healthy condition. all extra weight or pressure will be counteracted with, up to a certain point, no deleterious effects to the animal.

These conclusions are, I think, logical deductions from well-known facts and observations and offer a clear explanation of the changes and movements noted by Lungwitz in his experiments.

Last year my friend Dr. Macdonald read an essay before this Society on "The Vascular System as a Mechanism of Hydraulic Protection and Support," in which he contended that one of the principle uses of the close meshwork of bloodvessels and capillaries, ramifying all over and through the pedal bone was to equally diffuse the pressure by their fluid contents, thus bringing all the cells of the part into active resistance at once. Now as you are aware the veins of the foot have no valves, so if this theory be true, they must have a valve of some sort, which will allow a certain quantity of blood to escape, but at the same time prevent too rapid an exit, which would naturally tend to happen when the animal's weight was thrown on the foot. As you are aware, there is on either side of the lateral cartilages a plexus of veins draining the whole of the foot, and many of these veins are conducted through the substance of the cartilage. Pressure then applied to the foot means pressure applied to the bloodvessels, tending to cause an outbreak of the blood up the vessels of the leg, but pressure is at the same time applied by the plantar cushion (as we have seen before) to the lateral cartilages and the surrounding veins preventing by this means, the foot from being too suddenly deprived of its blood supply. Thus the cartilages and plantar cushion together may be said to act the part of a valvular apparatus, whose action depends upon the pressure applied—a complete automatic valve, and a remarkable conservation of energy.

Let us return to those experiments of Lungwitz which show in all his cases either a contraction or an expansion over the region of the lateral cartilages, depending upon the presence or absence of frog-pressure. Now, although in every one of Lungwitz cases there was movement either outwards or inwards (expansion or contraction) we are bound to admit there must be a certain percentage of cases in which there is no movement whatever, depending greatly upon the shape of the foot and the manner of movement. And when cartilage is not necessary or not used as a flexible agent, we almost invariably find it becomes ossified.

Before an animal is four years old there is simply a notch between the basilar and retrossal processes of the os pedis for the passage of the preplantar artery. After this period of life the notch becomes gradually converted into a foramen, and in cases where the lateral cartilages have been deprived of movement by any means the process of ossification simply extends upwards until they are completely converted into bone.

In cases where there is no lameness the cause of the want of movement is no doubt the shoes, but when there is lameness with the formation of bone I think it is due to injury or concussion setting up inflammation of perichondium the lameness being an evidence that the horse is trying to move his foot so as to exert no pressure on to the painful cartilages. He thus prepares the way for ossification to extend upwards.

So long as there is free movement in a cartilage I do not think there can be ossification. In fact the movement is the cause of the lateral cartilage persisting and has been the main factor in their formation during the evolution of the soliped from his three-toed ancestor—the hipparion or anchitherium. This is upheld by the fact that in the fœtal foot there is no distinction in structure between the portion that will persist as cartilage and the portion which will be converted into bone.

There seems to be much doubt amongst authorities whether the change undergone by a lateral cartilage when it is converted into a (so-called) sidebone, is ossification, or calcification. I have made sections from five different feet with well marked sidebones, and I find in each case *normal bone, similar in quality and stucture to the wing of the ospedis*, and in any other specimen that I have seen minute foramina for the passage of nutrient bloodvessels and nerves could be distinguished, quite distinct from the normal canals, for the conveyance of bloodvessels to other parts of the foot. In every case that I have seen the preplantar notch has been converted into a foramen with, in some cases, about half-an-inch of bone behind.

Those experiments of Lungwitz and what I have endeavoured to show is the physiology of the plantar cushion and lateral cartilages, conclusively prove that frog pressure is absolutely necessary for a healthy condition of that important organ the horse's foot.

In Glasgow and other large towns great thick toe-pieces and calkins are inseparable portions of the orthodox shoe, especially for the draught horse, along with severe paring of the sole and frog. Indeed the shoeing-smith takes such a delight in this carving of the foot that I verily believe his heart would break were he to be debarred from exercising his artistic talent. Needless to say this propensity should be as much as possible discouraged. A horse shod with toe-pieces and calkins when ascending a hill with a load behind him, *seems* to get great assistance from the toe-pieces because he digs them into the ground or between the cobbles, pulling himself forwards by the toe acting entirely and solely on the filed point, This is one of the chief arguments advanced by those who contend that it is better for an animal to go on three pegs, and it seems at first a very valid proof of their necessity. But because the horse progresses in a certain manner with a certain shoe it does not follow that it is normal or even better for him to do so. For when horses are shod with plain shoes an entirely different

style of movement is observed. The animal puts the flat of the foot to the ground, the fetlock bending backwards to allow the transmission of the weight fairly on to the centre of the foot, and as the horse's body moves gradually forward so does the fetlock. the foot still being kept flat on the ground, a movement far more natural and less hurtful, besides being more graceful that that of the poor animal who 'digs' his way onward spasmodically because of his anthropoid master's method of improving nature.

Of course, even, with plain shoes, the foot is far from being in a natural condition, for in most cases no frog pressure is allowed, hence the whole of the weight is transmitted into the wall. which is far better than on three points; but the frog, which is the specially adapted portion of the foot for preventing concussion, gets no work, or practically none, and it atrophies in consequence becoming predisposed to disease, and thereby predisposing other parts of the foot to disease.

If shoes must be used in all cases, a point on which I am very sceptical, the 'Charlier' or better the 'Rational' is undoubtedly the only one at all sensible (that is in a foot healthy and well formed from the first) because it allows every part of the foot to come into play and do its physiological duty. Shoeing was originally resorted to, about a thousand years ago in order to get more work out of a horse without damaging his feet, and the practice has been continued since simply by force of habit. Now I am not at all sure that the purposes for which shoes were invented have ever been attained, for taking all things into considration, horses would have profited by their absence, and so I think would their owners on the whole.

When the unshod foot of any animal comes to the ground concussion is transmitted as *a wave* up the limb, and in the horse outwards and backwards by the plantar cushion, because of the continuity of the structures. But when a shoe is applied, be it fitted ever so exactly, this wave of concussion is interrupted by the vibration of the shoe, which strictly speaking, must always be to a great extent slack, hence there is transmitted to the soft textures a series of waves instead of one, at each step. These waves affect the whole of the body, especially the legs, and though shoes are attached to the feet we must not confine ourselves to them for evil results they may cause. Undoubtedly the shoe by thus multiplying the vibration increases the amount of wear and tear in the limb to a great extent.

There is a compensatory law of nature, by which the harder a tissue or organ is worked, they will, up to a certain point become stronger and more resistant to injury, Witness the blacksmith's horny hand and muscular arm, or any form of physiological hypertrophy. Now the same law would apply to the horse's foot (if a little time and patience on the part of the owner were exercised) if left unshod. As regards 'chipping' of the foot, for which the Rational Shoe is mainly used, I think the same law would apply, but I do not think there is much danger of that. seeing that when the toe is on the ground there is a raising rather than a propelling movement exercised by the limb. (Muybridge's experiment.)

In conclusion, gentlemen, the subjects I have treated to-night may seem rather mixed, and my conclusions rather heterodox, and perhaps not thoroughly proved, though to me they seem logical deductions from known facts and observations. I know a man unconsciously gives most attention to what seems to uphold his theories, and tends to ignore facts which seem to point in an opposite direction, so that anything pro and con will benefit us all on these points. I only wish to say that there is a wide field for research in that apparently simple organ, the equine foot, and I have endeavoured to show you how it has interested me and the partial conclusions at which I have arrived.

DIARRHŒA AND ANÆMIA IN YOUNG CATTLE.

By Professor J. Penberthy.

In the autumn of 1882 I was called to a farm near Bedford to investigate the cause of severe losses in young cattle manifesting symptoms of "husk" accompanied by diarrhœa and rapid wasting.

Post-mortem examination yielded ample evidence of parasitic bronchitis and strongyles in large numbers, also a few specimens of the tricocephalus affinis in the intestines.

Among other remedial measures doses of turpentine and powders containing salt and iron were exhibited, and those animals least affected by the bronchial strongyle recovered and did well.

In November, 1889, I was called in consultation with another veterinary surgeon to the same farm where I found the young cattle from 8 to 12 months old affected, some with slight symptoms of "husk" but the majority with "an obstinate diarrhœa and wasting of flesh." Fifty per cent. had succumbed and the remainder were in a very anœmic and emaciated condition, scouring badly.

On examination of the carcase of a 10 month old heifer which was killed for the purpose, only two or three strongyles were found in the bronchial tubes, but under the $\frac{1}{4}$in. object lens in scrapings from the mucous membrane of the abomasum and small intestines, were to be seen large numbers of small strongyles varying from one-twelfth to one-sixth of an inch in length, in full maturity, the females containing many eggs in advanced stages of development. Small doses of turpentine were administered and salt and iron mixed with the food with the result that only two more died and the others though at first improving slowly in flesh, ultimately did well. The autopsy of one of the two which died afterwards yielded similar conditions.

Since this in several cases sent me I have discovered that parasite and in other instances success has followed the advice of treating with anti-parasitics. I am inclined to think that these parasites (probably there are two varieties) are more commonly the cause of serious persistent diarrhœa in

horned stock than is supposed. It was my intention on their first being noticed by me to have described the anatomical features of the worms which appeared to differ from that described as strongylus contortus which seriously affects lambs, but with the good intention the drawings then made have been set aside and some of them mislaid I fear, beyond recovery. I must confess that one object of this communication is to ask any of your readers who may meet with similar cases if they will be kind enough to send me the abomasum and intestines of any such animal which may be at their disposal.

NOTES ON THE BERLIN VETERINARY SCHOOL.

By Jno. A. W. Dollar.

Continued from page 350.

The School at the Present Time.

As will be seen from the accompanying map the Berlin Veterinary Hochschule covers an area of about 60,000 square yards or at least three times the space occupied by the London College. The principal entrance (from the Luisen Strasse) is through a main building containing two lecture rooms and servants' rooms overhead. Flanking this are the two wings, each of two stories, in which the Professors live and in the open quadrangle so formed, on a tall granite pedestal, stands a statue of Gerlach, erected by subscriptions by the united veterinary surgeons of Germany. Passing through the building one emerges into a large park-like space whose boundaries in summer it is quite impossible to perceive. At present the trees are bare, and through their leafless branches one sees rising towards the right, the cupola of the anatomical institute. This building is the only remaining sign of the original school. To the left is an imposing red brick building of two stories and a semi sunk ground floor, the human anatomical building, whilst in front is an expanse of park tastefully laid out with trees and shrubs.

Advancing towards the east one at length arrives at the stream dividing the grounds into two, and shortly afterwards sees on the left the one storied policlinic for small animals. Beyond it the medical clinique of Prof. Dieckerhoff, and on the right hand the new buildings which are being erected, one to house the servants of the establishment, the other to provide further accommodation for cattle.

At length, after a walk of some four or five minutes, the pathological institute appears, a fine building of two stories, with garret and sunk ground floor, designed in red brick, with relieving bands and ornaments in yellow and green terra-cotta. The roof is tiled, has ample eaves, and is only broken by the garret windows and by two ornamental towers one of which forms the chimney for the general heating apparatus.

Leaving here for a moment and advancing due north one passes between the stables of the medical clinique and the cowhouses and emerges into an extensive open space, covered deeply with sand and bordered on the west by the riding school and inspector's offices, on the north-west by the pharmacy, treasurer's offices and assistants' rooms, north-east by the stables of the surgical clinique and by the operating hall, and on the east by the smithy. At the extreme north-west is an entrance from Phillipstrasse and at the extreme opposite corner of the grounds, viz., the south-west, a similar entrance from Karlstrasse, making with that in Luisenstrasse three points of access.

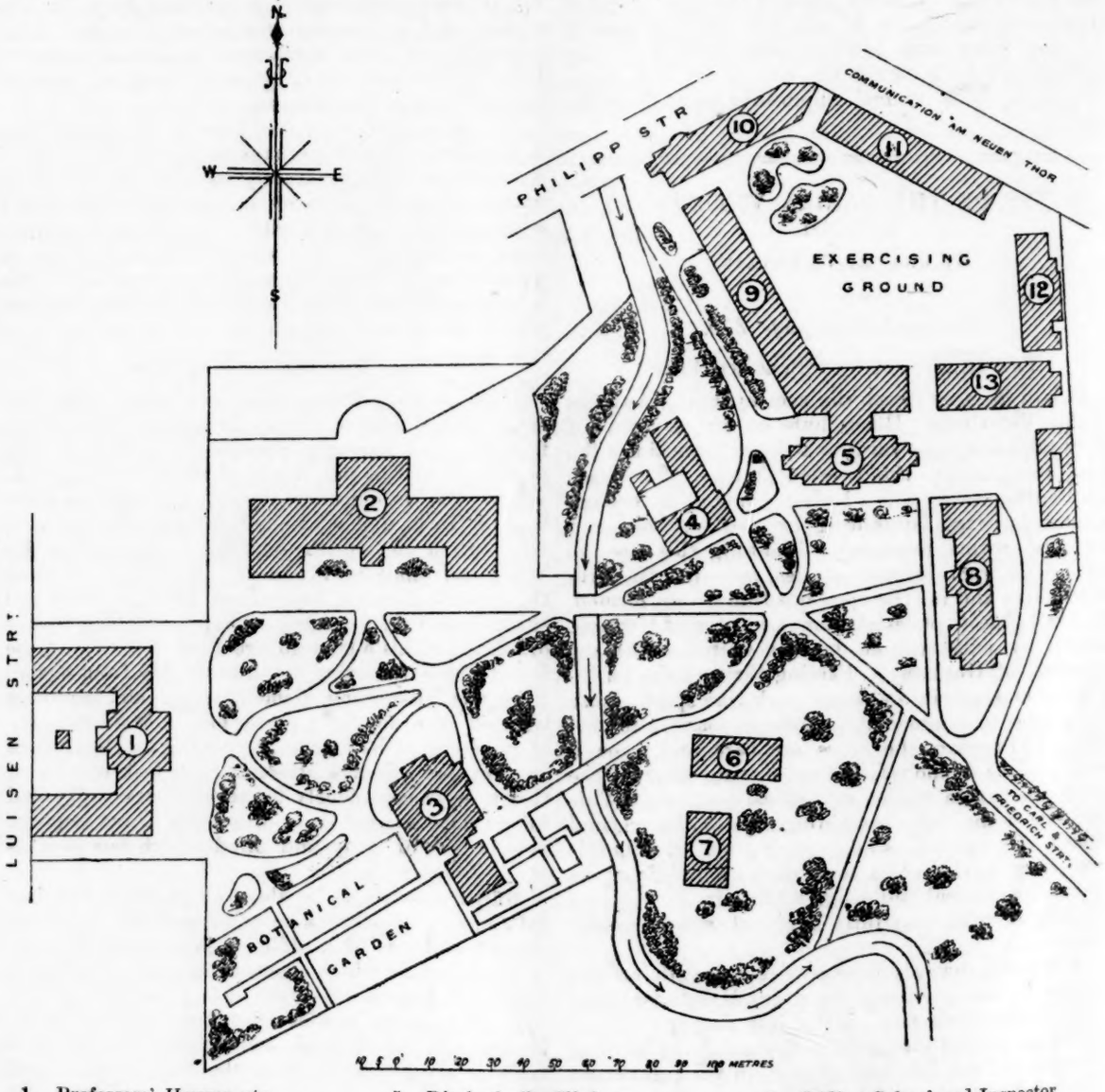
We have now seen the general divisions of the Institution. It will perhaps be more convenient if we examine each separately as they are to a great extent independant, more independant than would seem possible to a student of our private organisations in England. It is naturally impossible to give more than the slightest sketch of each, and this I have preferred to lay before my readers in great part in the form of narrative.

The Anatomical Institute.

It is perhaps fitting that we begin with the Anatomical Institute, firstly because it was the first founded, and secondly because Prof. Müller, who presides over it is the doyen of the entire establishment. He was officially appointed in 1859 as assistant to Gurlt and continued in that position until 1870 when on Gurlt's retiring he took over the name and office of Professor. He has twice filled the post of director, once from 1877 to 1878 and again from 1886 to 1887 Despite his long tenure of office and his advanced age Prof. Müller may be found in his dissecting room every day from 8 a.m. till 3 p.m. dissecting, demonstrating and lecturing with all the ardour of a young man. With the help of one assistant he carries out all the practical work and any one who has attempted the task will know that to work continously for seven hours a day and for six days a week in a dissecting room requires powers both of body and mind which few persons are endowed with.

Müller appears to be about 58 years of age, has dark eyes, grey moustache whiskers and beard, all clipped short, is of middle height and has that abstracted manner which often comes with much study, albeit his general conversation is genial and attractive. He speaks, besides his native tongue, Polish, Russian, Italian, French and English, and on his table is always to be seen the latest professional literature of the three last-named countries. He received me very kindly, ushered me into his private rooms and chatted for awhile on English affairs with a degree of knowledge which considerably astonished me. On learning my wish to see the Institute he most obligingly offered to act as guide, but on my suggesting that there was more to see than could well be compressed into a week, let alone an hour or two, he contented himself with showing me the buildings, and later gave me the keys and carte blanche to go where I pleased. We first inspected the dissecting room. This is on the ground floor and consists of two rooms, giving in all space for about 80 students to work at once. As a

matter of fact there are seldom more than 50. The roof is low, not more than 10 feet at most, but the rooms are fairly lighted by side windows and are heated by two large upright cylindrical stoves. As is usual in Germany in winter, heat is looked on as a commodity too precious to be lightly thrown away. The ventilating arrangements are therefore decidedly primitive, but there is little unpleasant smell as all the students smoke, and in addition (and this is the main point) the bowels are removed from all slaughtered horses as soon as the animals are dead, demonstrations being immediately held. The floor is of asphalte, and the tables are almost precisely similar to those in London. They are furnished with an



1. Professors' Houses, etc.
2. Human Anatomy Building.
3. Veterinary Anatomy Building.
4. Clinique for Small Animals.
5. Dieckerhoff's Clinique.
6. Servants' House (new)
7. Cow House (new)
8. Pathological Institute.
9. Riding School and Inspector
10. Apotheke and Treasury
11. Müller's Clinique
12. Smithy

iron rod at each corner which is stepped into a socket so that the legs of the cadaver may be tied thereto. For dissecting purposes horses alone are used. The students appear to work steadily and conscientiously, their preparations are fairly clean and well made and they seem anxious to verify for themselves the statements made in their anatomy volumes. The men work in companies of six and the work appears to be divided much as in England except that the head and neck are taken together. One man generally reads while the others demonstrate. There is moreover no muscle throwing or practical joking, although occasionally one hears a hearty laugh when the Professor rallies some particularly dense student on his incapacity. The specimens are all furnished by the school and are included in the fee of 50 marks (£2 10s.) paid at the commencement of each session. I may here remark that there are 8 sessions and the total fees, therefore, amount to £20 sterling. There are in all about 300 scholars in the college. Leaving the dissecting room one enters a low roofed vestibule where the washing basins stand, and passing

through this one comes directly under the floor of the theatre. In the centre are two heavy columns which serve both to support this floor and also to form guides for the table by which large preparations are lifted into the theatre obove.

We return to the Professor's private room where he leaves me with full permission to examine everything. The most important objects here are four large cases, three of which contain an almost unique helminthological collection. It was impossible to examine all but I calculated that the number could not be far short of 1200 specimens, each of which is labelled and has its catalogue number. The fourth case contains many anatomical preparationsin spirit, and over the writing table stand a number of stuffed birds used for demonstration purposes. From here one enters the museum—which unfortunately is very much crowded—the contents of four large rooms having lately been compressed into two, in order to make room for a chemical laboratory. In the centre of the room are massed the articulated skeletons of the larger animals in rows. These altogether number about 60 and comprise specimens of the horse, (10) ox, (5) sheep, llama, pig, eland, moose, deer, a variety of antelopes, gnu, reindeer, camel, lion, tiger, wolf, the larger varieties of dog, crocodile, kangaroo, and monkey, as well as human skeletons of both sexes. In addition are skulls (for demonstration) with the bones coloured, and a magnificent model of a horse, life size, in papier-maché. This is completely dissectable and shows muscles, nerves, blood vessels and bursal sheaths, the anatomy of the chest and abdomen as well as of the face, brain and foot. Every portion has its anatomical name clearly given on a small label, or is marked with a reference number. This model is the work of a French maker and is, without doubt, a masterpiece. The side cases in this room contain a very fine collection of skulls of the domestic animals, those of the horse numbering about 70, and in addition many complete skeletons, such as those of the monkey, cat, smaller varieties of dog, rodents of all kinds, armadillo, turtle, and skeletons of birds. In short it is difficult to name any creature in the animal kingdom which is not represented in one or other of the rooms of this museum. The only pity is that owing to want of space and money the collection is not more worthily displayed and cared for. The end case contains injected and dried dissections, some of considerable merit, but surprisingly few in number when compared with the truly colossal skelettal collection.

Room No. 2 is almost entirely devoted to preparations in spirit. There are many of Gurlt's very interesting gynæcological specimens, though the bulk of these, illustrating mispresentations, monstrosities and abnormal growths are at present in the pathological museum. Here, however, in 40 or 50 large jars are preparations showing the fœtal envelopes, fœtuses of the horse, swine, cattle, dog, sheep, goat &c in various stages of growth up to the time of birth. The wall cases also contain many fine embryological specimens, but the room is unfortunately too dark to admit of examining everything, and in addition the labels are in many cases faded and illegible. Amongst the unclassified specimens is a very fine one of omentum injected with mercury showing the lymph vessels. Just on leaving one notes the incomplete skeleton of an elephant and those of an ostrich and emu.

The theatre is encompassed by these rooms just as a circle might be surrounded with a square. From room No. 1 a passage leads to the professor's rostrum. The anditorium is spacious, and crowned with a dome and lantern whose apparent height is increased by their peculiar decoration. Below the springing of the dome is a range of windows which light the building, and between these are a series of fine allegorical paintings in monotone, representing agriculture and the subjugation and domestication of animals These date from the 18th century but unfortunately the artist is unknown. The feeling of roominess is increased by a gallery which encircles the building just below the windows, and from which the benches descend steeply on three sides to the central table where the professor stands. It is no uncommon occurrence to exhibit a preparaof an entire horse, and for convenience of handling this table rotates on a centre in addition to sinking through the floor into the cellar-like grounds floor where the preparations are made ready.

The benches face the entrance, and in winter the anditorium is heated by two large stoves, one of which stands on either side of the door. The other rooms encircling the theatre are devoted to the physiological laboratory of Prof. Munck, and those over the dissecting room form a chemical laboratory as above mentioned.

(*To be continued.*)

THE FELLOWSHIP.

By C. J. Reakes.

It is certainly high time that steps were taken to effect a thorough reorganisation of the system under which the Fellowship degree is obtained. Now that the New Charter has removed the necessity of a member of the profession becoming a Fellow before being eligible for election on the Council or the Examining Board, the only benefits conferred on its holder by the degree are the "honour" of its possession and such pecuniary advantage as might accrue to him by the acquisition of new clients who confidingly imagine that a Fellow must be a man of far superior attainments to those humble members of the profession who hold only the diploma of Membership. While the old charter was in operation, the Council may possibly have had in view the necessity of keeping the number of Fellows up to a certain standard in order that the profession at large when occasion arose to elect new members of Council or new Examiners, might have a sufficiently large number of eligible men to select from in order that these bodies might be made fairly representative. If this were the case, what a poor opinion they must have held regarding the amount of scientific and practical knowledge possessed by the existing members of the profession and of their

capability of attaining to a higher standard of professional education than is required of a youth of twenty-one, in order that he may become qualified. On no other grounds can I understand the action of the Council in making the acquisition of the degree such an easy matter. Even if this surmise be correct the necessity for such a reflection on the intellectual capacity of veterinary surgeons is removed by the New Charter, and now, if both Members and Fellows wish to uphold their self-respect and the dignity of their profession they should unanimously unite in an effort to raise the Fellowship degree from its present unworthy position, and make it something more than an empty title. I have no doubt that its possession carries with it a certain weight with the general public, but every member of the profession knows full well that only an ordinary amount of knowledge is necessary in order to enable a man to pass the examination, and this constitutes, as Mr. Garnett remarks, "a fraud on the public," and not only that, it certainly is not calculated to give one an exalted idea of the amount of self-respect possessed by a profession which allows such a state of affairs to exist. There are some gentlemen at present holding the Fellowship degree, who have, by their good work and ability gained for themselves a high position in the veterinary world, and earned the respect and admiration of all who know them. But would our opinion of them be in the slightest degree altered if they were simply Members, and not Fellows? not a bit of it! Under present conditions, the possession of this degree does not raise the holder one iota in the estimation of his co-practitioners. It is never too late to mend, and I sincerely hope and trust that a radical change may soon be effected, so that a man, before he can obtain the dignity of being elected a Fellow of the Royal College of Veterinary Surgeons, must show himself to be possessed of exceptional knowledge and ability, and thus prove himself worthy of the honour which such a title should confer on its holder.

TRANSLATIONS.

INTESTINAL OBSTRUCTION DUE TO OVARIAN CYST,

By M. Debrade, Chief Veterinary Surgeon to the 9th Cuirassiers (French Army).

Translated by Thos. J. Watt Dollar, M.R.C.V.S.

A very fine half-blood mare, Martha, 12 years old, the property of a superior officer of the regiment, was brought into the infirmary on the evening of the 13th August suffering from severe attacks of colic.

She was employed for carriage work. For several months, although very well cared for, she lost flesh, became very sluggish, was difficult to rouse and became quickly out of breath. Since the beginning of the year she had had three attacks of colic without apparent cause.

In the present case it was considered as due to slight indigestion and the usual treatment adopted. Towards six o'clock in the evening the mare appeared in great pain; she made frequent and violent efforts to defecate but without result, notwithstanding the many clysters and purgatives which were administered. She tried to roll and continually scraped the ground with her fore feet.

At ten o'clock in the evening she was bled and 15 centigrammes of pilocarpine were injected subcutaneously; nevertheless the colic pains continued throughout the night.

On the following morning the rectum was examined and found nearly empty; at the entrance to the abdominal cavity the hand encountered a very large mass, spherical in form of the size of a child's head, which interfered with the exploration of the anterior portion of the rectum; this cavity could only be examined above and laterally.

This tumour was placed to the right and in front of the pelvic cavity, directly below the bladder. It was situated behind the pelvic curve of the large colon from which it was separated by a considerable space, in the middle of which several loops of the small intestines and the floating colon were detected. This tumour strongly compressed everything that was placed below it; by pressing its walls with the fingers it was noticed that they were not hard and that it could be caused to fluctuate, thus indicating the presence of fluid in its interior.

The question of the nature of this tumour then arose; was it an ovarian cyst or some other neoplasy developed in the abdominal cavity? It was certain that it was not a matter of colic of the bladder; as the situation of that organ was easily determined by rectal examination, it was distended, but the mare had passed abundant quantities of urine on several occasions since the commencement of the attack. The confirmed stoppage of alimentary matter in the intestinal canal, produced by the mechanical obstacle formed by this tumour rendered the prognosis very serious. Sulphate of eserine and pilocarpine were administered subcutaneously, coffee, linseed tea, numerous purgatives and several clysters (lavements) were given every hour.

This treatment had no effect. During the evening of the second, and during the whole of the third day the mare remained standing, the head down, scraping the ground, trying from time to time to lie down and making continual efforts to get rid of fœcal matter. There was no swelling; by pressing the abdominal walls on each side the mare gave evidence of great pain and endeavoured to get out of the way No gas was passed and the injections were returned immediately.

On the evening of the third day she was again bled, three litres being removed, all the anodynes and evacuants in the pharmacy were administered; eserine and pilorcarpine were injected seven or eight times in very large doses, without any result. During the whole of the 4th and 5th days the pain continued in the same intense manner, the mare, thoroughly exhausted, succumbed towards midnight of the 5th day.

Autopsy: The *post-mortem* examination was made

six hours after death; the carcase was kept on the back and the whole of the abdominal wall carefully removed, the large visceræ were taken out and an enormous tumour in the right flank was exposed. This had no attachments with the mesentery or with the loops of the intestines; on lifting it up it was seen to be united to the right side of the uterus by the broad ligament; it was lying directly on the last portion of the floating colon, the walls of which were considerably reduced by its pressure. The part of the colon supporting this weight was as it were shrivelled, the walls bloodless, there was no excrementitial matter in the interior On the contrary, in the other intestinal compartments and in that portion of the floating colon which was in front of the tumour, numerous excessively hard knobs united to form balls were found.

This tumour occupied the place of the right ovary; no trace of that organ could be found; it was replaced by a very large cyst united to the posterior part of the uterus by the broad ligament. The surface of this ligament was much greater than that usually observed, all its anterior border was folded on to the posterior face of the cyst, thus increasing the thickness of its walls to which it was intimately attached. The broad ligament was three times its normal thickness, large quantities of aponeurotic fibres entering into its composition and enabling it to support the great weight of the cyst.

The fallopian tube had completely disappeared. The capillary vessels at the surface of the cyst and on the ligament were three or four times their normal diameter; they could be easily distinguished and presented very beautiful arborisations. The form of the tumour was regularly spherical. 0m. 26 in diameter, 0m. 87 in circumference. It weighed (about) 27 pounds 9 ounces.

On puncturing the cyst by means of a trocar, more than 9 litres of very thick, brownish red, odourless liquid escaped. The walls of the cyst were rather more than 3 centimetres in thickness, and partly formed of very resisting fibrous tissue.

To the kindness of M. Chastaing, assistant professor at the Paris School of Pharmacy, we are obliged for the following complete analysis of the contents of this cyst.

Per litre:

Residuum fixed at 100 (C)	Mineral matters, 10 gr. formed by;	Chloride (supposed of sodium)	4,220
		Phosphoric acid 0,237 whence Trisodic phosphate	0,557
		Anhydrous sulphuric acid 1.40, whence Sulphate of soda	2,485
		Sesquioxide of iron	4,280
		Carbonate of Soda	2,458
145 grammes composed of:	Organic matters 135 gr.	Hydropisine, 76 gr Serine 53 gr whence albumine	0,129
		Paralbumine Colouring matters	6,000

Microscopical Examination.—1—Large granulous cells; coloured red, characteristic of cyst of the ovary; 2—Small number of red globules; 3—Large number of leucocytes; 4—Some needle-shaped crystals (perhaps fat?); 5—A few epithelial cells; 6—Some special masses, not characterised, coloured yellow and of the most varied forms.

The left ovary was three times its normal size, its envelope was thickened and fibrous; in the thickness of its substance five other small cysts, with thin and transparent walls had formed, and which when punctured allowed a small quantity of lemon-coloured fluid to run out.

At what period did this cyst commence to form? perhaps at the beginning of the year when symptoms of colic were noticed on several occasions? Was the liquid it contained gradually produced, or did it supervene in the cyst but a short time previously to the last attacks of colic in consequence of an acute state which rapidly brought about the formation of such a large quantity of fluid?

The very considerable thickness of the cyst walls clearly showed that this lesion was of old standing, and that it gradually attained its exaggerated volume. The contents were, moreover, in a real state of deliquium without the least blood clot; the numerous capillary vessels at the surface of its walls were by no means filled with blood as is always seen as the result of congestion or recent inflammation.

If it had been possible to diagnose ovarian cyst, the intestinal obstruction might have been momentarily relieved by puncturing the tumour by way of the vagina and allowing of the escape of the contained fluid by this orifice, an antiseptic injection might also have been used by the same means.

Certainly a radical cure might have been attempted by performing ovariotomy by the flank, but the owner of the mare was anxious that the animal should suffer no longer, and he was opposed to this capital operation.—*Recueil de Med. Vét. d'Alfort, Sept.* 15, 1892.

Royal College of Veterinary Surgeons.

SPECIAL MEETING OF COUNCIL HELD NOVEMBER 29TH, 1892.

W. J. MULVEY, Esq., President, in the chair.

Present:—Vet.-Col. Lambert, C.B., Vet. Lieut.-Col. Oliphant, Vet.-Capt. Raymond; Professor Penberthy; Messrs. Barford, Beddard, Fraser, Hartley, Trigger, and Wragg, Mr. A. W. Hill (Secretary), and Mr. Thatcher (Solicitor).

The SECRETARY read the notice convening the meeting.

Letters expressing regret at inability to attend were received from Professors McCall, Williams, and Walley; Messrs. Burnett, Edgar, Mason, Taylor, Merrick, Nisbet, Kidd, Hedley, and Wheatley.

On the motion of Mr. BARFORD, seconded by Mr. TRIGGER, the minutes of the last quarterly meeting were taken as read.

The PRESIDENT:—You have been called together today in consequence of the Privy Council having forwarded to us the Charter for which we applied some time ago. In the preamble to the Charter it states that Her Majesty considers it desirable that certain things should be done—in fact, grants all that we asked for; but when we come to the enactment clauses we find that

Clause 4 is omitted, the clause which allows an increase of the fees for examination. Our solicitor not being satisfied with this, and considering that he could not legally carry it out in the absence of the enactment clause, desired me to call this meeting, and requested that he might take the opinion of counsel, and he will now tell you the result, and his own opinion of the Charter as it stands.

Mr. THATCHER (Solicitor).—I have put a case before counsel, but I do not think I need trouble you with the whole of it; I will give you the salient points. I may mention that I received the Charter, and found that a particular clause which was in the draft had been left out in the Charter itself. I thereupon went to the Privy Council office and saw some one upon the subject, and was requested to put my application into writing, which I did. This is my letter to the Privy Council; it is dated 1st October:—"On the 24th ultimo the Supplemental Charter was transmitted to me from the Home Office, but I was at that time absent from town, and did not return until this morning, when I first had the opportunity of personally examining it. On reference to the enactment clauses I found that Clause 4 in the draft is altogether omitted; this is the clause giving the Royal College Veterinary Surgeons power to increase the examination fee to £21; and inasmuch as this has never been objected to, and the recital with regard to it is retained in the preamble, I think there can be no doubt that the clause itself has been omitted by mistake, and I shall be glad if the necessary steps could be taken at once to rectify it. As I have no doubt the omission is purely one of mistake, it is hardly necessary to point out why it is essential that the clause should appear, still at the same time it may save trouble if I do so. The Charter of 1844 gives the Council power to make bye-laws fixing the fees for examination and admission, but it goes on to say that these fees must not exceed ten guineas. The Charter of 1883 (Clause 2) increases this to any sum not exceeding thirteen guineas, so that you will readily observe that although the College has the power of fixing fees, it cannot by any bye-law override a Charter fixing a maximum amount. This appears to have been recognised by your officers in allowing the preamble in the draft to stand, and there is no doubt that its omission in the actual enactment is purely a mistake. I regret that the draft as finally settled in Royal Council, or at least the engrossment, was not sent to me before the seal was attached, as I should have detected the mistake at once, and it would probably have saved a great deal of trouble to all parties. I shall be very glad to hear from you on the subject at your earliest convenience, and will at once send back the Charter for correction on hearing to what department it ought to be returned."

I did not receive an answer to this until the 20th November, when I had the following letter:

"SIR,—Referring to your letter of the 1st ultimo, with respect to the omission in the recent Supplemental Charter to the Royal College of Veterinary Surgeons of Clause 4 as it stood originally in the operative part of the draft Charter, I am directed by the Lords of the Council to inform you that their Lordships are advised that in the Charter there is clear recital that it appears to Her Majesty expedient to authorise an increase in the fees, and that the examination fees be fixed at a minimum of twenty guineas; and although it might have been more formal and in accordance with precedent to retain the original Clause 4, yet the recital standing alone sufficiently expresses the will of Her Majesty, and enables the Corporation to make bye-laws charging the the additional fees. I am to return to you the Charter forwarded in your letter of the 13th ultimo.

I am, Sir,
Your obedient Servent,
HERBERT M. SUFT."

I have set out in the case to council my views as to the matter, and have concluded by asking questions, which he has answered. The first question I asked is—"Is the opinon of the law officers as expressed in the letter of the 19th. November correct, and can the College safely rely upon it?" The answer is—"In my opinion the Charter must be construed very much as would be a deed between individuals, and the Crown is as much affected by the recitals or preamble as an individual would be by a recital in a deed under his seal. I think, therefore, that the Crown could not allege in the future that the College had not the authority to increase the examination fees to the extent which the Crown stated to be expedient. In my opinion the College can safely rely upon the Charter as it stands."

The second question I asked was this: "Asssuming question No. 1 to be answered in the affirmative, what course should the College pursue if a candidate presented himself for examination and declined to pay the increased fee, and what would be the proper course for the candidate himself to take in the event of the College refusing to examine him on that ground?" Answer: "Under the circumstances suggested in this question the College should, in my opinion, refuse to examine the candidate." The third and fourth questions were these: (3) "Assuming Council to be of opinion that the view of the law officers is not correct, what is the proper course for the college to take to rectify the mistake?" (4) "Assuming the present Charter to be surrendered, and a new one applied for, would it be competent for its opponents to renew their opposition on the points which have already been decided? Generally advise the College their best course, having regard to all the circumstances." Answer: "Assuming the opinion which I have expressed in the first answer not to be well founded, I am of opinion that, under the circumstances, it would be imprudent on the part of the college to press the matter further. The Privy Council would, I think, refuse to make any amendment in the Supplemental Charter; and in the improbable event of it being held in the future that, notwithstanding the Supplemental Charter, the College has no power to increase the examination fee, the College would then be in the most favorable position for making another application to the Crown to set the matter right. On such an application the Privy Council, having regard to the correspondence which has passed, could scarcely fail to recommend the Crown to carry out what is now stated to be its intention. I think if the present Charter were surrendered it would open the door to the various oppositions which are anticipated.

"C. E. H. CHADWYCK HEALEY."

Vet.-Col. LAMBERT:—Is Mr. Chadwyck Healey a great authority?

Mr. THATCHER (Solicitor):—Yes; he has a considerable practice at the Chancery bar, and he is a Q C.

Vet.-Col. LAMBERT:—Then his name carries great weight, I suppose?

Mr. THATCHER:—Yes. I have ascertained who was the law officer of the Crown who advised, and I may say that he is considered to be one of the best lawyers in the kingdom; it is Sir John Rigby, the present Solicitor-General.

Vet.-Capt. RAYMOND:—The only remark I have to make is this: it would be as well, in case of future accidents, that we should be able to produce some proof, if we take this Charter as it is, that we have applied for something further than the Charter. The only thing we have received has been from an assistant clerk of the Privy Council.

The PRESIDENT:—He is instructed by the Lords of the Council.

Vet.-Col. LAMBERT:—He is delegated with power by the Lords of the Council; he distinctly says that.

Mr. THATCHER :—Yes, he distinctly says that in the letter which I have already read.

Vet.-Capt. RAYMOND :—Do I understand from that letter that we can by our bye-laws raise the fees?

Mr. THATCHER :—Up to a maximum of twenty guineas—not beyond.

Mr. TRIGGER :—Should we be wanting in respect or dignity if we asked for this clause to be inserted? It seems to me it would be more satisfactory if we had this clause in our Charter.

The PRESIDENT :—It is in the preamble of the Charter, and the words are—"Now, in view of the increased expense of holding the examination of candidates for membership, consequent upon the progress and extent of veterinary knowledge, it appear to us expedient to authorise an increase in such fees"—you see it is plain enough; that is Her Majesty speaking,—"and that the examination fees be fixed at a maximum fee of twenty guineas."

Vet.-Col. LAMBERT :—It says, "It would have been more formal and in accordance with precedent" if the clause had been inserted in the body of the Charter. Now we are bound up by precedent in this country.

Mr. THATCHER :—In the preparation of this case I looked up, so far as I could, the law upon the subject, but I need hardly tell you that it is a case by itself. I found there was a case cited—the case of Howard v. the Earl of Shrewsbury, 17 Equity, p. 378—in which it appears that a recital in an Act of Parliament has an operative effect. The question I put here is whether express enactments in two Charters can be overridden by a recital in a Charter of later date.

Mr. TRIGGER :—It seems to me that it opens the door to controversy for a student to ask if we have the right to charge him 20 guineas. We cannot get beyond the fact that if we could in any way get that into the Charter it would be better.

Mr. WRAGG :—I take it it is impossible for us to get this clause inserted in the Charter. We must apply for a new one if we want it in.

Vet.-Capt. RAYMOND :—Is that absolutely certain that we cannot get this Charter remedied?

Mr. THATCHER :—Yes, we can only get it remedied either by surrendering this and having a new Charter, or by having a further supplemental Charter.

Vet.-Capt. RAYMOND :—Do you mean surrendering all the rights we have got, or merely throwing up this piece of paper?

The PRESIDENT :—It means surrendering all the rights we have obtained by it on the chance of getting them back again.

Vet.-Capt. RAYMOND :—Then the clerks in the Privy Council Office have made a mistake.

The PRESIDENT :—Yes, that is it.

Vet.-Capt. RAYMOND :—I think we are pretty safe.

The PRESIDENT :—There is no doubt that we are quite safe. It would have been very much better if the clause had been inserted, but taking the Charter with the letter from Mr. Suft, and the opinion of counsel, we may regard ourselves as perfectly safe. The only thing that can happen to us is that some time or other a student may decline to pay any more than 13 guineas; then it is for him to take the initiative, and we are assured by counsel that we are perfectly within our rights.

Professor PENBERTHY :—They arranged to pay twenty guineas; they entered on those conditions. In accepting this Charter I do not see that we have anything to lose. We could not get the clause in the Charter if we wanted it altered. If we find we cannot work with this, we can have a new Charter, and begin *de novo*. We have the opinion of our counsel, and we have got the opinion of the Solicitor-General whose law is based on fundamental principles, which cannot very well alter. Our Solicitor has a case in point himself, where he has shown us we should be right in doing what we are doing. There is not one of us who would not rather have it laid down specifically, but the act of the law officers of the Crown I should think is best interpreted by themselves, and we have that letter, which of course is as sacred now as the Charter, and would show our *bona fides*. It is not likely, in my opinion, than any student would enter unless he understood the conditions.

Mr. BARFORD :—I propose that we receive this Charter as it is placed before us, with the explanations that we have heard.

Mr. WRAGG :—I beg to second that.

The resolution was then carried unanimously.

NEW MEMBERS OF THE PROFESSION.

At a meeting of the Court of Examiners held in London on and between December 12th and 16th, 1892, the following students from the Royal Veterinary College passed their examinations :—

Mr. J. Toms	Mr. H. S. Leonard
W. C. Quinnell	W. G. Pakeman
E. W. Thorburn	A. G. Grist
J. J. Parkinson	R. Youngs
A. H. Lane	J. W. Pritchard
H. Green	H. L. Tidey
W. Stapley	A. E. G. Batt
W. F. Widden	H. W. Dollar
J. A. Gilruth	B. P. Godfray
R. Forshaw	P. T. Falshaw
T. W. Smith	J. B. Burr
G. Upton	H. Reynolds

The following students passed their second examination :—

Mr. W. Lindley		Mr. E. Bell	
H. Custance		F. H. Pogson	
W. Newman		E. L. Stroud	
A. H. Stroud	*	H. Sturge	
H. Mason		R. G. Saunders	
G. Tomlinson		E. H. Fisher	
G. Parr		W. Fowle	*
S. L. Stephens	*	T. E. Jones	*
A. H. Job	*	J. A. Craft	*
C. M. Lawton			

The following students passed their first examination :—

Mr. J. B. O. Taylor		Mr. J. P. Heath	*
W. Wordley		F. B. Gresham	
H. W. Chappell	*	C. F. Walters	*
C. W. J. Tennant		F. W. Dowell	*
F. W. Cox		T. J. Hunting	
H. Edie	*	J. H. Engel	
S. W. Pratt		J. W. M. Carroll	
A. H. Berry		C. A. Powell	

Marked thus * passed with great credit.

ARTHUR W. HILL, *Secretary.*

CORRESPONDENCE.

THE FELLOWSHIP.

SIR,

In reply to Mr. Garnett's letter in your issue of Dec. 24th, I beg to say that I fail to see how I have misconstrued his first letter, or made contradictory statements in my letter of the 17th.

I quote from his letter of Dec. 3rd the following pas-

sage:—"I confess I look upon it as a fraud upon the public, and a disgrace to the profession, but at the same time I am open to conviction."

Now there is no chance of anyone putting a wrong construction on this passage as it is clear enough. With regard to his statement that my letter is contradictory, I shall feel obliged by him pointing out wherein the contradiction lies.

With regard to the quotation which he makes, viz., that a candidate for the degree is only required to show that "he had read and kept up his work carefully and well" I see that it is necessary to explain to him that by this passage I did not mean that the work to be kept up was the mere ground work as required for the second and final examinations of the College, but reading *combined with clinical observation and experience*, a study which can only be prosecuted while in actual practice. I still maintain that this is the knowledge which is required from the candidates for the higher degree.

And even if it was only the work required for the second and final examinations, which was required from the candidate, I can assure Mr. Garnett, that when he is in actual practice for five years or more, he will find that *even* the keeping up of his education received at College, is by no means such an easy matter as he imagines.

His remark with reference to only specialists holding the higher degree, hardly calls for comment, as I am sure when he is eligible for the examination, such a high-flown notion will have entirely disappeared.

I would, in conclusion refer him to the regulations of the Royal College of Surgeons of England, as regards their examination for the higher degree, where he will see no mention of "specialists."—Yours truly,

E. Wallis Hoare, F.R.C.V.S.

Cork, Dec. 26, 1892.

Communications, Books, and Papers received:—Prof. McCall, Prof. Penberthy, Sir H. Simpson, Messrs. T. J. Dollar, E. Wallis Hoare, C. J. Reakes, W. Awde, J. B. Wolstenholme, John S. Kelland, Anon. Exams., "The Scotsman."

Veterinary Societies—Addresses.

Bombay V.M.A.

Pres

Hon. Sec: S. K. Narimaa, Esq., M.D., B.S.C., L.V.SC.

Off Hon. Sec: Mr. J. D. Parokh, G.B.V.C., Bombay Vet. Coll.

Border Counties V.M.S.

Pres: Mr. R. Rutherford, F.R.C.V.S., Edinburgh

Hon. Sec: Mr. J. Armstrong, M.R.C.V.S., Penrith, Cumberland

Meetings, Second Friday of Feb., June, and October.

Calcutta V.M.A.

Pres: Mr. Greenhill, M.R.C.V.S.

Hon. Sec: Mr. T. Assheton Smith, 156 Dhurrumtollah.

Central V.M.A.

Pres: Mr. W. Roots, M.R.C.V.S.,
13 Winchester Street, London, S.E.

Hon. Sec: Mr. H. G. Rogers, M.R.C.V.S.,
170 Brompton Road, London, S.W.

Meetings, First Thursday in each month, except August and September, 10 Red Lion Square, Holborn, at 7 p.m.

Eastern Counties V.M.A.

Pres: Mr. F. Low, M.R.C.VS., Norwich.

Hon. Sec.: Mr. W. Shipley, Jnr., Southtown, Gt. Yarmouth

Meetings, Second Tuesday, Feb. and July.

Vet. Med. Assn. of Ireland.

Pres: Mr. T. D. Lambert, F.R.C.V.S. Store Street, Dublin.

Hon. Sec Mr. J. McKenny, M.R.C.V.S.,
116 Stephens-green-west, Dublin.

Lancashire V.M.A.

Pres: Mr. W. Woods, F.R.C.V.S, Standish Gate, Wigan.

Hon. Sec: Mr. J. B. Wolstenholme, M.R.C.V.S.,
Quay Street, Manchester.

Meetings, 2nd Wednesday in March, June, Sept., & Dec.

Lincolnshire V.M.S.

Pres: Mr. T. E. Smith, M.R.C.V.S., Market Rasen

Hon. Sec: Mr. J. Smith, M.R.C.V.S., Huntingdon.

Meetings, Second Thursday, Feb., June and October.

Midland Counties V.M.A.

Pres: Mr. F. W. Barling, M.R.C.V.S., Ross, Hereford

Hon. Sec: Mr. H. J. Dawes, M.R.C.V.S.,
High St., West Bromwich.

Meetings, Second Friday in Feb., May, November, Second Tuesday in August.

National Vet. Association.

Pres: Mr. E. Faulkner, M.R.C.V.S., Manchester

Sec: Mr. John Malcolm, F.R.C.V.S., Birmingham

Sec. of Prov. Com:

National Veterinary Benevolent & Mutual Defence Society.

Pres: Mr. Peter Taylor, F.R.C.V.S., Manchester

Treas: Mr. Thomas Greaves, F.R.C.V.S., Manchester

Hon. Sec: Mr. Sam Locke, M.R.C.V.S.,
Grosvenor Street, Oxford-st., Manchester

North of England V.M.A

Pres: Mr. W. Hunter, M.R.C.V.S, Newcastle.

Hon. Sec: Mr. W. A. Hancock, M.R.C.V.S.,
Forest Hall, Newcastle-on-Tyne.

Meetings, Third Friday, Feb., May, Aug. and Nov.

Royal Counties V.M.A.

Pres: Mr. J. D. Barford, F.R.C.V.S., Southampton.

Hon. Sec: Mr. J. Sutcliffe Hurndall, M.R.C.V.S.,
Sussex Villas, Cornwall Gardens, South Kensington.

Meetings, Last Friday, Feb., June and Nov.

Royal Scottish V.S.

Pres: Mr. Reid, M.R C.V.S., Auchtermuchty.

Hon. Sec: Mr. W. D. Fairbairn, M.R.C.V.S., Cupar, Fifeshire

Royal Veterinary College M.A.

Pres: Mr. Wild.

Hon. Sec: Mr. T. F. Wilson.

Scottish Metropolitan V.M.S.

Pres: Prof. W. O. Williams, F.R.C.V.S., New Vet. Coll., Edin.

Hon. Sec: Mr. P. Moir, M.R.C.V.S., 9 Kilmain Terr. Edinbro'

South Durham and North Yorkshire V.M.A.

Pres.: Mr. F. R. Stevens, M.R.C.V.S., Darlington.

Hon. Sec: Mr. W. Awde, F.R.C.V.S., Stockton-on-Tees.

Meetings, First Friday, Mar., June, Sept. and Dec.

Southern Counties V.M.S.

Pres: Mr. J. F. Simpson, F.R.C.V.S, Maidenhead.

Hon. Sec: Mr. C. Pack, M.R.C.V.S., Lymington, Hants.

Meetings, Last Thursday, Mar., June and Sept.

South Wales and Monmouthshire V.M.A.

Pres: Mr. D. M. Storrar, M.R.C.V.S., Abergavenny.

Hon Sec. Mr. A. C. Stewart, M.R.C.V.S., Cardiff.

Meetings, First Thursday in March, and Autumn.

Western Counties V.M.A.

Pres: Mr. G. H. Elder, M.R.C.V.S., Taunton, Somerset

Hon. Sec: Mr. W. Harvey Bloye, M.R.C.V.S.,
Ebrington Street, Plymouth.

Meetings, Third Thursday, March and September.

West of Scotland V.M.A.

Pres: Mr. D. Allan, M.R.C.V.S., Clarkston-by-Busby, Glasgow

Hon. Sec: Mr. W. Anderson, F.R.C.V.S., West Nile-st Glasgow

Yorkshire V.M.A.

Pres; Mr. G. E. Bowman, Woodhouse Lane, Leeds.

Hon. Sec; Mr. W. F. Greenhalgh, M.R.C.V.S.,
110 North Street, Leeds.

Meetings, Last Friday in Jan., April, July, and October.